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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,128	04/09/2004	Jun E. Lee	IVGN 373	8246
65482	7590	09/05/2007		
INVITROGEN CORPORATION C/O INTELLEVATE P.O. BOX 52050 MINNEAPOLIS, MN 55402			EXAMINER SISSON, BRADLEY L	
			ART UNIT 1634	PAPER NUMBER
			MAIL DATE 09/05/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/821,128

Applicant(s)

LEE ET AL.

Examiner

/Bradley L. Sisson/

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2007 and 15 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 32-82 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,6,8,9,15,55,59,62,64,71,76 and 78 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

Continuation of Disposition of Claims: Claims withdrawn from consideration are 2,4,7,10-14,32-54,56-58,60,61,63,66-70,72-75,77 and 79-82.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I, with the following election of patentably distinct species, in the reply filed on 30 August 2006 is acknowledged. The patentably-distinct species elected are:
  - a. Template is present, and is a population of mRNA molecules;
  - b. No detectable label is present,
  - c. An enzyme with transcriptase activity is present; and
  - d. The modified nucleotide is also present, and is aminoallyl-dUTP.
2. While Group I originally comprised claims 1-31 and 55-71, the subsequent election of patentably distinct species narrowed Group I to the following claims: Claims 1, 3, 5, 6, 8, 9, 15, 55, 59, 62, 64, 71, 76, and 78. It is noted that claims 76 and 78 were added via amendment 07 May 2007.
3. Claims 16-31 were cancelled by the amendment of 15 February 2007.
4. Claims 2, 4, 7, 10-14, 32-54, 56-58, 60, 61, 63, 66-70, 72-75, 77, 79-82 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 30 August 2006.

### *Claim Rejections - 35 USC § 112*

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 3, 5, 6, 8, 9, 15, 55, 59, 62, 64, 71, 76, and 78 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Independent claims 1, 55, and 76 each make reference to the composition or kit comprising “monomeric deoxyribonucleoside triphosphates” (emphasis added). A nucleoside, by definition, lacks the phosphate group, while a nucleotide has a phosphate group. Consequently, it is less than clear just what applicant is intending by use of the expression “deoxyribonucleoside triphosphate.” Claims 3, 5, 6, 8, 9, 15, 59, 62, 64, 71, and 78, which depend from said claims, fail to overcome this issue and are similarly rejected.

8. Claims 3, 5, and 59 recite the limitation "said modified nucleotides" in line 1. There is insufficient antecedent basis for this limitation in the claims.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1, 3, 5, 6, 8, 9, 15, 55, 59, 62, 64, 71, 76, and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,709,815 B1 (Doug et al.) in view of US Patent 6,906,244 B2 (Fischer et al.).

13. For purposes of examination, the expression “monomeric deoxyribonucleoside triphosphates” has been construed to mean “monomeric deoxyribonucleotide triphosphates”

14. Doug et al., column 44, last paragraph, bridging to column 45, disclose a method by which PCR as well as RT-PCR is performed using mRNA as a template. Doug et al., also disclose that the reaction can be one that incorporates any combination of modified nucleotides. The aspect of Doug et al., performing RT-PCR speaks directly to the presence of an enzyme with reverse transcriptase activity.

15. While Doug et al., has been found to disclose using various analogs, including dUTP, they have not been found to teach the use of aminoallyl-dUTP.

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16. Fischer et al., column 49, fourth paragraph, discloses using aminoallyl-dUTP in an assay that utilized a reverse transcriptase and mRNA.

17. It is further noted that the reagents, including the aminoallyl-dUTP, were provided in a kit.

18. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of Doug et al., by incorporating aminoallyl-dUTP into same, as disclosed by Fischer et al., as Fischer et al., teaches explicitly of using such to produce transcripts of mRNA and that such can also be provided in a kit.

19. In view of the detailed teachings, and advanced state of the art, said ordinary artisan would have had a most reasonable expectation of success.

20. Accordingly, and in the absence of convincing evidence to the contrary, claims 1, 3, 5, 6, 8, 9, 15, 55, 59, 62, 64, 71, 76, and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,709,815 B1 (Doug et al.) in view of US Patent 6,906,244 B2 (Fischer et al.).

### ***Conclusion***

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley L. Sisson whose telephone number is (571) 272-0751.

The examiner can normally be reached on 6:30 a.m. to 5 p.m., Monday through Thursday.

22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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23. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bradley L. Sisson/  
Primary Examiner  
Art Unit 1634

BLS